



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,913	09/15/2003	Jiann-Chen Chen	N81438/LPK	1253

1333 7590 08/06/2009  
EASTMAN KODAK COMPANY  
PATENT LEGAL STAFF  
343 STATE STREET  
ROCHESTER, NY 14650-2201

EXAMINER
----------

LIGHTFOOT, ELENA TSOY

ART UNIT	PAPER NUMBER
----------	--------------

1792

MAIL DATE	DELIVERY MODE
-----------	---------------

08/06/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Art Unit: 1792

*Advisory Action*

The Request for Reconsideration filed on July 31, 2009 under 37 CFR 1.116 in reply to the final rejection has been considered but is not deemed to place the application in condition for allowance for the reasons of record set forth in the Final Office Action mailed on April 30, 2009.

*Response to Arguments*

Applicant's arguments filed July 31, 2009 have been fully considered but they are not persuasive.

Applicants continue arguing that the preamble of claim 19 is Applicants' own work. The Badesha et al reference cited as "evidence" that the preamble of original claim 19 is not Declarants' own work, in any event does not disclose all of the elements of the preamble of claim 19 (in particular, while a hollow cylinder core for a fuser roll may be disclosed, there is no disclosure that such hollow cylinder core is adapted to be positioned on a machine mandrel in a fuser system, and no disclosure that the fuser roll is produced by mounting the hollow cylinder core on a mandrel configured to receive the hollow core over the outside of the mandrel and performing the steps of applying, curing and machining coatings while the hollow cylinder core is mounted on the mandrel). Thus, such Badesha et al reference is deficient as to establishing that the preamble of original claim 19 in its entirety is prior art. In view of such facts, it is again respectfully urged that the Examiner cannot continue relying upon the preamble of original claim 19 as "admitted prior art".

The Examiner respectfully disagrees with this argument. Fig. 1 of Badesha et al shows clearly a fuser roller is **an assembly** comprising a hollow cylinder core mounted on a mandrel. It would be within the level of ordinary engineering skill to replace only a hollow cylinder core by removing the core from the mandrel, when the surface of the fuser roller wears out the surface, as evidenced by US 3,751,216 to Gregory teaching that by employing a fuser roll assembly, the shell may be removed when the shell is worn. Gregory teaches: "In a typical construction of a fuser roll assembly, a **hollow**, generally cylindrical roll is mounted for rotation about its longitudinal axis, and is provided, along this axis, with an electric heating element. Such a roll is usually constructed of copper or aluminum and is provided with a coating of a suitable thermoplastic material, for example, polytetrafluoroethylene (hereinafter referred to as PTFE). PTFE is a fluorocarbon resin currently sold under the trademark "Teflon" by the E. I. duPont de Nemours and Company, Inc". (See column 1, lines 27-27). "By employing the fuser roll

Art Unit: 1792

**assembly** of the present invention, when the shell is worn, **it may be removed** (when the roll is at room temperature or when the expansion device is contracted) and thereafter discarded. A new shell may then be positioned concentrically about the core and spaced apart from the core; the core expanding to grip the shell tightly as the roll is brought up to its operating temperatures, or as the expansion device is expanded” (See column 2, lines 37-44).

Moreover, there are other references showing that all featured of the preamble of claim 19 were known in the art:

US 5021109 to Petropoulos et al is cited to show that coating a cylindrical *plastic* roll by mounting the roll on a metal mandrel and holding it tightly while coating the roll with a fluoropolymer was known in the art (See column 6, lines 24-26). US 3,950,839 to DuPree et al is cited to show that holding tightly a cylindrical *metal* roll on a metal mandrel while coating with a metal layer was known in the art (See column 5, lines 1-57).

Thus, in contrast to Applicants argument, all features of Preamble of claim 19 were known in the art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy Lightfoot whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Friday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1792

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy Lightfoot, Ph.D.  
Primary Examiner  
Art Unit 1792

August 6, 2009

/Elena Tsoy Lightfoot/

The Declaration establishes that the preamble of original claim 19 refers to work done by the Declarants, which to the best of their knowledge was not publically disclosed before the filing of the instant application, and thus clearly overcomes any "presumption" that such preamble is "admitted" prior art. To the extent the Examiner is attempting to argue that there is other prior art that discloses subject matter that may be similar to certain elements referred to in the preamble of original claim 19, this has no bearing on whether the preamble of claim 19 itself, and in its entirety, is admitted to be prior art by the Applicant. ii) Further, the Badesha et al reference cited as "evidence" that the preamble of original claim 19 is not Declarants' own work, in any event does not disclose all of the elements of the preamble of claim 19 (in particular, while a hollow cylinder core for a fuser roll may be disclosed, there is no disclosure that such hollow cylinder core is adapted to be positioned on a machine mandrel in a fuser system, and no disclosure that the fuser roll is produced by mounting the hollow cylinder core on a mandrel configured to receive the hollow core over the outside of the mandrel and performing the steps of applying, curing and machining coatings while the hollow cylinder core is mounted on the mandrel). Thus, such Badesha et al reference USSN 10/662,913 -2- is deficient as to establishing

Art Unit: 1792

that the preamble of original claim 19 in its entirety is prior art. In view of such facts, it is again respectfully urged that the Examiner cannot continue relying upon the preamble of original claim 19 as "admitted prior art". To the extent the Examiner believes there is alleged relevant prior art such as the cited Badesha et al. reference, such actual prior art should itself be considered. To the extent the rejections continue to rely upon alleged "admitted prior art" in the form of the preamble of original claim 19, such rejections are in clear error, as any presumption of admission based on the format of original claim 19 has clearly been overcome. Claim rejections - 35 USC 103 The Examiner's acknowledgement that Shirley et al teaches a photoconductive member and no \_\_\_! a fuser roller, and withdrawal of associated rejections based Shirley et al, is noted and appreciated. Claims 1-3, 5-6, 8-11, 14, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' admitted prior art (AAA) and applied as evidence Shirley et al., Hartley et al. and Chert et al., and further in view of Wallin, Kawada et al., Bird et al., and Weber et al. for the reasons of record set forth in paragraph 2 of the Office Action mailed on 10/21/2008 because typical hollow cylinder cores described by AAA read on claimed sleeve. This rejection is respectfully traversed. Though not explicitly cited, the referenced "reasons of record" set forth in paragraph 2 of the Office Action mailed on 10/21/2008 apparently continues to rely on the preamble of original claim 19 as "admitted" prior art, as the Examiner notes in such paragraph that Applicants "discloses that the improvement comprises forming the mandrel of a metal having a coefficient of thermal expansion equal to...", and as there is otherwise no antecedent basis for the Examiner's use of the term "the mandrel" in such paragraph 2. As explained above, continuing to rely upon such preamble as prior art represents clear error. Excluding such preamble of original claim 19, there is no cited actual prior art (including any

Art Unit: 1792

actually admitted prior art) USSN 10/662,913 3 that is directed to forming a replaceable fuser roller member by a method comprising the required claim steps of mounting a nickel sleeve on a mandrel being configured to receive the sleeve over the outside of the mandrel, and performing the steps of applying, curing and machining coatings while the nickel sleeve is mounted on the mandrel. While the specification does acknowledge in the paragraph bridging pages 2-3 that toner fuser rollers typically include a hollow cylinder core, such acknowledgement is not an admission of prior art regarding the preamble of original claim 19 in its entirety, i.e., to the extent alleged by the Examiner. The Examiner cites many references in the rejection, but none of it teaches or suggests such claim requirements. Further, the cited "reasons of record" improperly rely upon Shirley et al as teaching replaceable fuser rollers, which as now acknowledged by the Examiner is clearly in error. For all these reasons, the rejection "for the reasons of record" clearly fails to establish a prima facie case of obviousness, and represents clear error. In response to Applicant's arguments that the reference to "hollow cylinder core" in the specification is directed towards the typical fuser rollers wherein the hollow cylinder is itself rigid and of substantial thickness so as function as the "core" of the roller itself, the Examiner states that she disagrees with such argument because Applicants refer to such hollow cylinder core "without referring to the thickness of the hollow cylinder core", and the Examiner cites Badesha et al as evidence that hollow cores can be thin cylinders, and that prior art hollow cylinder cores thus "read on" the claimed sleeve "to be" positioned on a machine mandrel.. While it is initially pointed out that it is clear error to interpret an omission as to any specified thickness of the prior art hollow cylinder cores as an admission of all possible thicknesses, such argument by the Examiner in any event totally neglects the point that Applicants referred to such prior art hollow cylinders as

Art Unit: 1792

hollow cylinder cores (as does Badesha et al), not as a sleeve adapted to be positioned on a machine mandrel (i.e., where the mandrel, not the sleeve, in effect is the "core" of the roller). Further, there is no support for the Examiner's statement that Badesha et al actually refers to element 4 as a "thin cylinder" (no such reference to "thin" has been found with regard to cylinder 4 as alleged by the Examiner). While it is noted that there are no assurances that Fig. 1 of Badesha et al depicts the elements thereof in actual relative scale, it is noted that fuser roller 1 and backup roller 8 are depicted as having approximately equal outer diameters, and the Example in col. 10 of Badesha et al USSN 10/662,913 -4- describes preparation of a pressure (i.e., backup) roller of 3 inch diameter. The thickness of cylinder 4 of the fuser roller 1 appears to be approximately 1/20 of the diameter of roller 1. Thus, assuming the fuser roller 1 is of the same diameter as the pressure roller prepared in the Example, the thickness of cylinder 4 would be approximately 1/20 of 3 inches, or 0.15 inch. Such thickness is substantially greater than that which would be employed for a replaceable sleeve adapted to be positioned over a machine mandrel in order to function as a fuser roller, and in particular 3 times the maximum typical thickness of a sleeve as described, e.g., at page 6, lines 26-29 of the specification, and as claimed in original dependent claim 6 (it is noted that Applicants mistakenly referred to claim 5 in the previous response when making reference to claimed thickness of the sleeve). Finally, Applicants' claimed invention is directed towards a method for producing a replaceable fuser member wherein a nickel sleeve is actually required to be mounted on a mandrel during manufacture of the replaceable fuser member, not merely that the replaceable fuser member so manufactured is "to be" positioned on a machine mandrel as argued by the Examiner. Thus, the prior art hollow cylinder cores clearly do not "read on" the sleeve employed in the claimed

Art Unit: 1792

method. In response to Applicants' explanation that the Examiner's reliance upon Wallin is in error as the teachings of Wallin would not be applicable to the present claimed invention as the present invention is not directed towards formation of a metal belt on a mandrel, and further the present invention is directed towards employing a metal sleeve and mandrel having similar coefficients of thermal expansion to minimize differential expansion during formation of the layers formed on the metal sleeve, rather than being directed towards the use of materials having substantially different coefficients to facilitate separation of a metal layer formed on the mandrel, the Examiner argues that as the claimed invention is directed towards employing a mandrel having a coefficient of thermal expansion equal to 80-120 percent of the coefficient of thermal expansion of the metal sleeve, the claimed invention includes similar and dissimilar materials. Such argument by the Examiner entirely disregards that the claimed percentages are intended to provide reasonable matching of coefficients of thermal expansion to minimize differential expansion (see, e.g., page 5, lines 16-24), while the cited Wallin reference is directed towards employing materials with intentionally mis-matched coefficients. The Examiner USSN 10/662,913 -5- further argues that Wallin in any event would be applicable to the present invention as the present invention is directed towards "formation of a metal cylindrical belt on a mandrel". Such position is in clear error, as the claimed invention is not directed towards formation of a metal cylindrical belt itself on a mandrel. Rather, the invention describes mounting a nickel sleeve (i.e., the sleeve is already pre-formed) on a mandrel, and the subsequent formation of various layers on the mounted nickel sleeve. In response to Applicants' arguments that a prima facie case of obviousness has clearly not been established, as the "admitted prior art" with respect to hollow cylinder cores referred to by the Examiner does not



Art Unit: 1792

relate to the sleeve employed in the present claimed invention, the Examiner simply responds that "hollow cylinder cores referred to by the Examiner do relate to the sleeve employed in the present claimed invention." Such unsupported allegation, however, does not address the arguments made by Applicants as to why such elements are distinct as explained above, especially as none of the cited art is directed towards a method for producing a replaceable f-user roller member employing the required steps of the claimed invention. Further, as to Applicants' argument that the further cited art clearly does not teach or suggest the present claimed invention, and that it is clear the Examiner has attempted to pick and choose unrelated aspects of the cited art in an attempt to recreate the claimed invention in a manner that could only be done with the impermissible use of hindsight based on Applicants' own teachings, the Examiner has not responded with any explanation as to how the artisan would be directed towards the present claimed invention based on the cited prior art. Reconsideration of this rejection is accordingly respectfully requested. Claims 1-3, 5-6, 8-11, 14, 16-18, 21, 23, and 25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over a combination of AAA in view of Shirley et al., Wallin, Kawada et al, Bird et al., Weber et al., Hartley et al. and Chert et al., as applied above, and further in view of Badesha et al. for the reasons of record set forth in paragraph 8 of the Office Action mailed on 10/10/2006. This rejection is respectfully traversed for all of the reasons explained above (including improper reliance upon alleged "admitted prior art" in the form of the preamble to original claim 19, acknowledged improper USSN 10/662,913 -6- interpretation of the teachings of Shirley et al, and as there is no teaching in of the cited actual prior art (or actually admitted prior art) which is directed towards forming replaceable fuser roller members by a method comprising the required claim steps of mounting a nickel sleeve on a mandrel being

Art Unit: 1792

configured to receive the sleeve over the outside of the mandrel, and performing the steps of applying, curing and machining coatings while the nickel sleeve is mounted on the mandrel).

While the Examiner again attempts to argue that the preamble of original claim 19 is not Declarants' own work because hollow fuser members were known in the art as evidenced by Badesha et al., such arguments by the Examiner clearly fail to establish that the preamble of claim 19 in its entirety was known in the art (in any event, should the Examiner have actual evidence thereof, she should rely on such actual prior art evidence, rather than continue to attempt to rely upon the preamble of original claim 19, which has clearly been established by the Declaration as referring to non-published work performed by Declarants, not "admitted prior art"). While the Examiner states that the prior art "does not expressly teach that the cured base cushion elastomer is machined to a desired thickness", a more appropriate statement is that the prior art does not teach coating, curing, and machining a base cushion layer on a nickel sleeve mounted on a mandrel having the required relatively matched coefficient of thermal expansion. While Badesha et al does describe grinding a fluoroelastomer coating to a desired outer diameter at col. 10, this is not a teaching of grinding a base cushion coating on a sleeve mounted on a mandrel to form a replaceable fuser roller. To the contrary, col. 10, lines 15-18 and 26-45 cited by the Examiner refer to formation of a pressure roller by grinding fluoroelastomer coated on a standard steel core. Since there is no replaceable element comprising a sleeve to be mounted on a mandrel, distortion is not a problem, and there is no requirement for matching coefficients of thermal expansion to prevent distortion of a sleeve element during the method. While the Examiner additionally cites references to passages teaching a hollow cylinder or core for fuser rollers, as explained above such hollow cylinder cores of the prior art are designed to be

Art Unit: 1792

sufficiently rigid to be employed as the core of the roller itself, rather than to be mounted on a mandrel during USSN 10/662,913 -7- formation of the roller coating layers. Accordingly, the rejection is in clear error for the same reasons as explained above with the first rejection.

Reconsideration is accordingly respectfully urged. Claims 1-3, 5-6, 8-11, 14, 16-18, and 21-25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over a combination of AAA in view of Shirley et al., Wallin, Kawada et al., Bird et al., Weber et al., Hartley et al. and Chen et al., as applied above, and further in view of Petropoulos et al. This rejection is respectfully traversed for all of the reasons explained above (including improper reliance upon alleged "admitted prior art" in the form of the preamble to original claim 19, acknowledged., improper interpretation of the teachings of Shirley et al, and as there is no teaching in any of the cited actual prior art (or actually admitted prior art) which is directed towards forming replaceable fuser roller members by a method comprising the required claim steps of mounting a nickel sleeve on a mandrel being configured to receive the sleeve over the outside of the mandrel, and performing the steps of applying, curing and machining coatings while the nickel sleeve is mounted on the mandrel), as the added Petropoulos et al. reference does not overcome the basic deficiencies of the rejection as discussed above. Further, while Petropoulos et al may disclose nickel as a typical mandrel material, Petropoulos et al is directed towards a method of forming a multilayered belt comprising a polymeric material substrate, rather than coatings on a nickel sleeve. Accordingly, to the extent Petropoulos might teach use of a nickel mandrel, it clearly does not teach or suggest employing such a nickel mandrel in combination with a nickel sleeve. Reconsideration is accordingly respectfully urged. Claim 18 stands rejected under 35 U.S.C. 103(a) as being unpatentable over a combination of AAA in view of Shirley et al., Wallin, Kawada et al, Bird et

Art Unit: 1792

al., Weber et al., Hartley et al. and Chela et al., as applied above, and further in view of Schlueter, Jr. et al. for the reasons of record set forth in paragraph 11 of the Office Action mailed on 10/10/2006. This rejection is respectfully traversed for all of the reasons explained above  
USSN 10/662,913